

**A SYSTEM AND METHOD FOR USING LOWER DATA RATES FOR  
PRINTHEADS WITH CLOSELY SPACED NOZZLES**

**ABSTRACT OF THE DISCLOSURE**

5           The present invention is embodied in a system and method for using  
lower data rates and less memory, for high nozzles per inch printheads. The  
printing system of the present invention includes a printhead assembly and an  
ink supply for printing ink on print media. The printhead assembly includes a  
10    printhead body, ink channels, a substrate, such as a semiconductor wafer, a  
nozzle member and a barrier layer located between the wafer and nozzle  
member. The nozzle member has plural nozzles coupled to respective ink  
channels and is secured at a predefined location to the printhead body with a  
suitable adhesive layer. The printhead has a controller which can be firmware,  
15    software or any suitable processor that can control the ejection of ink from the  
plural nozzles. The controller can be defined in the integrated circuit as  
receiving data stored in the data in the buffer memory, assigning primitive  
addresses in the heater array from the data, and determining the firing pulse  
rate of the heater elements in the heater array. The controller can be created  
by any suitable integrated circuit manufacturing or programming process.